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28 MAR 2005

PCT/JP2003/012662



# **PCT**

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

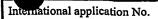
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference YCT-871	FOR FURTHER ACTION	See Form PCT/IPEA/416				
International application No.	International filing date (day/month/)	vear) Priority date (day/month/year)				
PCT/JP2003/012662	02 October 2003 (02.10.20)	03) 02 October 2002 (02.10.2002)				
International Patent Classification (IPC) or n C07D 499/04, C07B 63/00, B01						
Applicant	NIPPON SODA CO., LTI	).				
	ninary examination report, established mitted to the applicant according to A	by this International Preliminary Examining rticle 36.				
	4 sheets, including this	cover sheet.				
	3. This report is also accompanied by ANNEXES, comprising:					
a. [] (sent to the applicant and	a. (sent to the applicant and to the International Bureau) a total of sheets, as follows:					
sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).						
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.						
b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))  , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).						
4. This report contains indications relating to the following items:						
Box No. I Basis of the r	eport					
Box No. II Priority						
Box No. III Non-establish	ament of opinion with regard to novelt	y, inventive step and industrial applicability				
Box No. IV Lack of unity	of invention					
Box No. V Reasoned star	tement under Article 35(2) with regard explanations supporting such statemer	I to novelty, inventive step or industrial applicability;				
Box No. VI Certain docum	ments cited	_				
Box No. VII Certain defec	ts in the international application					
Box No. VIII Certain obser	vations on the international applicatio	n				
Date of submission of the demand	Date of com	pletion of this report				
15 April 2004 (15.04.	2004)	06 December 2004 (06.12.2004)				
Name and mailing address of the IPEA/JP	Authorized	officer				
Facsimile No.	Telephone l	No.				

Translation



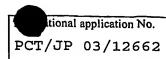


## PCT/JP2003/012662

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

Box Mo	o. 1 Basis of the report	
	h regard to the language, this report is based on the international application in the language in which it erwise indicated under this item.	was filed, unless
	This report is based on translations from the original language into the following language which is language of a translation furnished for the purpose of:	,
	international search (under Rules 12.3 and 23.1(b))	
	publication of the international application (under Rule 12.4)	
	international preliminary examination (under Rules 55.2 and/or 55.3)	
furni	th regard to the elements of the international application, this report is based on (replacement shaished to the receiving Office in response to an invitation under Article 14 are referred to in this report are not annexed to this report):	eets which have been ort as "originally filed"
	The international application as originally filed/furnished	
	the description:	originally filed/furnished
	required by this Anthority on	•
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	the drawings:	originally filed/furnished
1	manifest the Alia Anthonies on	originary moderationed
	pages* received by this Authority on	
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╽╙╜	a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.	
l	1	
3	The amendments have resulted in the cancellation of:	
	the description, pages	
ł	the claims, Nos.	
	the drawings, sheets/figs	
	the sequence listing (specify):	
	any table(s) related to sequence listing (specify):	
	hand v v v v v v v v v v v v v v v v v v v	
4.	This report has been established as if (some of) the amendments annexed to this report and listed made, since they have been considered to go beyond the disclosure as filed, as indicated in the (Rule 70.2(c)).  the description, pages	
	the claims, Nos.	
1	the drawings, sheets/figs	
	the sequence listing (specify):	
[	any table(s) related to sequence listing (specify):	
* If it	item 4 applies, some or all of those sheets may be marked "superseded."	





v.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
1	citations and explanations supporting such statement

1. Statement			
Novelty (N)	Claims	2-5, 8-10	YES
	Claims	1, 6, 7	NO
Inventive step (IS)	Claims		YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

#### 2. Citations and explanations

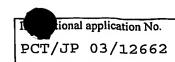
Document 1: WO 92/03444 A1
Document 2: JP 5-301882 A

Document 2 discloses a method for producing organic compounds, which comprises a dehydration step for decreasing the water concentration to a prescribed level or lower, wherein azeotropic dehydration is conducted while adding a solvent that contains chloroform, and discloses a feature wherein the azeotropic dehydration is conducted continuously and efficiently by adding appropriate amounts of an alcohol with a carbon number between 1 and 4 and a non-polar solvent (preferably chloroform, dichloromethane or carbon tetrachloride) in relation to the amount of solvent that is distilled out.

Consequently, the invention pertaining to a method for producing organic compounds that is set forth in claim 1 lacks novelty and does not involve an inventive step in the light of the disclosures of document 2.

In addition, document 2 also discloses the feature of dissolving the compound that is obtained by means of azeotropic dehydration in alcohol, adding a non-polar solvent (chloroform, dichloromethane or carbon tetrachloride are used in the examples) thereto, and then crystallizing.

#### INTERNATIONAL PRELIMINARY EXAMINATION REPORT



Consequently, the inventions pertaining to a method for producing organic compounds that are set forth in claims 6 and 7 lack novelty and do not involve an inventive step in the light of the disclosures of document 2.

Meanwhile, document 1 discloses a method for producing (5-Methyl-2-oxo-1, 3-dioxolen-4-yl) methyl (5R, 6S)-6-[(R)-1-hydroxyethyl]-2-(3-tetrahydrofuryl) methylpenem-3-carboxylate from (5R, 6S)-6-[(R)-1hydroxyethyl]-2-(3-tetrahydrofuryl) methylpenem-3carboxylate and 4-iodomethyl-5-methyl-2-oxo-1, 3dioxolene; therefore, in the light of the well-known technical issue of obtaining an end product that has a low water content, a person skilled in the art could select the solvent and the like that are used in the production method disclosed in document 1 pursuant to the method that is disclosed in document 2 so as to accommodate the characteristics of the starting materials and of the end product, as appropriate. Furthermore, there is not considered to be any significant effect that results from such a configuration.

Consequently, the methods for producing organic compounds that are set forth in claims 2 to 5 and 8 to 10 do not involve an inventive step.